

CLAIMS:

Sub B2

1. A positioning device having a guiding surface extending parallel to an X-direction and parallel to a Y-direction, a first object holder and a second object holder which are each guided over the guiding surface and are each displaceable parallel to the X-direction and parallel to the Y-direction from a first position into a second position, and a displacement system for displacing the first object holder and the second object holder over the guiding surface, characterized in that the displacement system comprises a first displacement unit and a second displacement unit to which the first object holder and the second object holder can be coupled alternately, the first displacement unit being suitable for displacing the object holders from the first position into an intermediate position between the first position and the second position, and the second displacement unit being suitable for displacing the object holders from the intermediate position into the second position.

2. A positioning device as claimed in claim 1, characterized in that the displacement units each comprise an X-motor having a first part extending parallel to the X-direction and a second part which is displaceable along the first part of the X-motor and can be coupled alternately to the first object holder and to the second object holder, and two Y-motors each having a first part extending parallel to the Y-direction and a second part which is displaceable along the first part of the relevant Y-motor, the first part of the X-motor of each displacement unit being connected to the second parts of the two Y-motors of the relevant displacement unit.

3. A positioning device as claimed in claim 2, characterized in that the first parts of the Y-motors of the two displacement units are connected to a common balancing unit which is guided relative to a base of the positioning device so as to be displaceable parallel to the X-direction and parallel to the Y-direction and to be rotatable about an axis of rotation extending perpendicularly to the X-direction and the Y-direction.

Sub B3

4. A positioning device as claimed in claim 1, 2, or 3, characterized in that the object holders each comprise a basic part which is guided over the guiding surface and can be coupled to the displacement units, and an object table which is displaceable relative to the basic part by means of an actuator unit of the relevant object holder.

5. A positioning device as claimed in claim 4, characterized in that the

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